

Remarks/Arguments

A. Status of the Claims

No claims have been amended, added, or canceled. Therefore, claims 39 and 41-82 are pending.

B. Comments Concerning the Piecemeal Examination of this Application

Applicant is frustrated with the way this case is being handled by the Examiner. This frustration stems from the Examiner's statement at page 9 of the Final Office Action mailed November 16, 2007, that claims 40-46, 52-61, and 82 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." Applicant relied on this statement and revised all of the independent claims to incorporate the subject matter of allowed claim 40 in a Submission and Request for Continued Examination electronically filed with the U.S. Patent Office on March 17, 2008.

Instead of receiving a Notice of Allowance, Applicant received a new anticipation and a new obviousness rejection, both of which are addressed below. Applicant wonders why these rejections were not previously presented by the Examiner in the Office Actions mailed on May 29, 2007, and November 16, 2007. It appears that this case is being subjected to a "piecemeal examination" process, which should be avoided. *See* MPEP § 707.07(g). Applicant requests that the piecemeal examination of this case cease immediately.

As explained below, the reference used to support the anticipation and obviousness rejections (*i.e.*, U.S. Patent 5,525,654 to Podola *et al.* ("Podola")) fails to disclose or suggest Applicant's claimed "antiplasticizing additive."

C. The Anticipation Rejection Is Improper

Claims 39, 47-51, 58, 62-63, and 73-75 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Podola. In order to support the anticipation rejection of independent claims 39 and 58 in view of Podola, every element of the claims must be "identically shown" in this reference. See *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) ("For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference.").

1. Scope and Content of Podola

Podola describes the preparation of a curable adhesive composition, comprising an alkoxysilane-terminated polyurethane pre-polymer and a diurethane plasticizer. Podola at Abstract. The alkoxysilane-terminated polyurethane pre-polymer is obtained by reacting a NCO-terminated polyurethane pre-polymer with alkoxysilane containing groups reactive toward isocyanate functions, in particular thiols or amine groups. *Id.* at col. 4, lines 25-50. Therefore, this reference describes a composition capable of giving rise to a three-dimensional polythiourethane matrix.

The plasticizing agents are obtained by reaction of a mixture of diols and mono-isocyanates or diisocyanates and mono-alcohols. *Id.* at col. 5, line 42, to col. 6, line 21. In this regard, Example 4 of Podola (col. 8, lines, 15-24) concerns a diurethane obtained from the reaction of polypropylene glycol and phenyl isocyanate. Example 5 of Podola (col. 8, lines 26-33) concerns a diurethane obtained from the reaction of polypropylene glycol monobutyl ether and 4,4'-diphenyl diisocyanate. After curing in the presence of an additional alkoxysilane, the polymerizable compositions may lead to soft or hard compositions. *Id.* at col. 7, lines 17-27.

2. The Differences Between Applicant's Claimed Invention and Podola

Independent claims 39 and 58 both concern, in part, a “thermoset plastic material comprising a three-dimensional matrix containing sulphur atoms and at least one antiplasticizing additive that does not react with said matrix....” Applicant's specification at page 3, line 27, to page 4, line 18, provides a description of the similarities and differences between antiplasticizing agents (such as those claimed by Applicant) and plasticizing agents (such as those disclosed in Podola). In this regard, the specification states:

Antiplasticization

Introducing a small, non reactive molecule into a polymer results in the plasticization of the material that is characterized by a drop in glass transition temperature (T_g), as well as by a decrease in the storage modulus as compared to the pure material. The additive is then called plasticizer. The antiplasticization as evidenced by Jackson and Caldwell (Jackson W. J., Caldwell J. R, J. Appl. Polym. Sci, 11, 211 (1967), Jackson W. J., Caldwell J. R, J. Appl. Polym. Sci, 11, 227 (1967)) does also express as a decrease in the glass transition temperature, but differentiates itself from plasticization in that the storage modulus increases in a temperature range that is generally close to the ambient temperature. In that case, the additive is called antiplasticizer.

Specification at page 3, line 27, to page 4, line 3. It is important to note in the context of the current anticipation and obviousness rejections that Applicant's claimed antiplasticizing agent increases its storage modulus. By comparison, the Podola plasticizing agent decreases its storage modulus.

The Examiner appears to take the position that plasticizing agents of Podola (*i.e.*, diurethanes) fall within Applicant's claimed “antiplasticizing agents.” For instance, it is noted by the Examiner at page 3 of the Action that the plasticizers of Podola fall within the scope of the carbonyl containing compound of claim 51. Applicant notes that diurethanes are also claimed in claim 51.

Applicant respectfully disagrees with the Examiner's position. As explained above, the specification clearly defines the claimed "antiplasticizing agents" in claim 39 (and its corresponding dependent claim 51) as compounds that have "antiplasticizing" behavior--*i.e.* compounds that can increase their storage modulus (which is contrary to plasticizing agents, which decrease their storage modulus). The carbonyl (and diurethane) compounds that are covered by instant claim 51 are those having an antiplasticizing behavior.

Podola aims at plasticizing a polythiourethane-siloxane matrix--*i.e.*, making it more elastic, softer, more processable and more flexible (col. 1, lines 23-25). This is contrary to Applicant's claimed invention, namely to carry out antiplastification of the matrix--hence, the claimed "antiplasticizing additive." Consequently, a material resulting from curing a composition according to Podola that includes one of the plasticizing agents disclosed therein does not anticipate the claimed invention.

3. Conclusions Concerning the Anticipation Rejection

Podola concerns the combination of alkoxysilane-terminated polyurethanes and plasticizers. The plasticizers are used "to improve [matrix] elasticity and also its softness, flexibility and processability." By comparison, Applicant's claimed thermoset plastic material in claims 39 and 58 utilize antiplasticizing additives, which result in antiplastification of the matrix.

In summary, Podola discloses plasticizing agents, whereas Applicant's claims 39 and 58 utilize antiplasticizing agents. That is, Podola's disclosure is deficient with respect to the claimed "antiplasticizing agents." Therefore, the current anticipation rejection should be withdrawn. *See In re Bond*, 910 F.2d at 832 ("For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference.").

Applicant requests that the current anticipation rejection be withdrawn.

D. The Obviousness Rejection Is Improper

Claims 39, 47-51, 58, 62-63, and 73-75 are rejected under 35 U.S.C. § 103(a) as allegedly being rendered obvious by Podola. Action at pages 3-4. Applicant respectfully takes the position that all of the arguments provided above equally apply to the obviousness rejection.

Further, Applicant respectfully notes that there does not appear to be any reason of record to modify the Podola composition by replacing its plasticizers with antiplasticizers. If anything, such a modification would likely render the Podola composition unsatisfactory for its intended purpose—*i.e.*, to plasticize its composition. See MPEP § 2143.01[V] (“If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.”).

Applicant requests that the current obviousness rejection be withdrawn.

E. Conclusion

Applicant believes that this case is in condition for allowance and such favorable action is requested. The Examiner is invited to contact the undersigned Attorney at (512) 536-3020 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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